WT Docket No. 99-328

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Before the
Federal Communication Commission
Washington, D.C.

In The Matter Of	)	
	)	
QUALCOMM Incorporated	)	File No.
	)	
Petition for Waiver of Section 22.921	)	
Of the Commission's Rules	)	

PETITION FOR WAIVER

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SUMMARY

QUALCOMM Incorporated seeks a temporary waiver, until November 30, 2000, of Section 22.921 of the Commission's Rules, to the extent necessary, to permit the continued manufacture of QUALCOMM's TriMode Portable User Terminal designed primarily for operation with the Globalstar constellation of satellites.

The Terminals may not be in compliance with Section 22.921 because units manufactured after February 13, 2000 do not include a separate capability for processing 911 calls that allows calls to be handled by either analog cellular carrier operating in the area. QUALCOMM will develop software to comply with Section 22.921 and will enable the software to be installed in all inventoried Terminals and all Terminals returned for service or repair, including those manufactured before February 13, 2000.

QUALCOMM believes that the public interest favors a grant of the request, first, because a waiver will support the development of satellite technology valuable for emergency communications uses and, second, because a waiver will satisfy consumer interests and result in deployment of analog call completion techniques beyond that required in Section 22.921.

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To: Chief, Wireless Telecommunications Bureau

PETITION FOR WAIVER

QUALCOMM Incorporated ("QUALCOMM"), by its attorneys and pursuant to Section 1.41[1] of the Rules of the Federal Communications Commission ("FCC" or "Commission"), hereby requests expeditious grant, to the extent necessary, of a waiver of the requirements of Section 22.921[2] of the Commission's Rules. This waiver will permit the continued manufacture of QUALCOMM's TriMode Portable User Terminal designed primarily for operation with the Globalstar constellation of satellites. This waiver will be required only for a limited period, from February 13, 2000 until November 30, 2000, and will assure full compliance with the Rule.

I. BACKGROUND

A. Section 22.921

In May 1999, the Commission adopted the *Second Report and Order* in Docket No. 94-102, RM 8143, as part of its effort to increase the efficacy of emergency calling procedures.[3] The *Second Report and Order* sought to "improve the ability of analog cellular phone users to successfully complete wireless 911 calls."[4] Section 22.921 requires that analog cellular phones, manufactured after February 13, 2000, include a separate capability for processing 911 calls that

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1 47 C.F.R. § 1.41

2 47 C.F.R. § 22.921.

3 *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket 94-102, Second Report and Order, 14 FCC Rcd 10954 (1999) ("*Second Report and Order*").

4 *Id.* at para. 1.

allows calls to be handled by either analog cellular carrier operating in the area.[5] In this way, the Commission sought to improve the likelihood that 911 calls would be completed, even in those cases where the service offered by a subscriber's preferred carrier was not sufficient to complete the call.

The Commission established three methods of 911 call completion that would satisfy its requirements: Automatic A/B Roaming-Intelligent Retry ("IR"), Adequate/Strongest Signal, and Selective Retry. The Rule applied only to "new analog cellular handsets, not to existing handsets or to digital services such as Personal Communications Service ("PCS") or Enhanced Specialized Mobile Radio ("ESMR")."[6]

Importantly, however, the Commission specifically applied the Rule to dual mode and multi-mode handsets when operating in the analog mode. The industry voiced concerns that the feasibility of including 911 call completion procedures in dual and multimode handsets had only recently been raised and had not been thoroughly investigated.[7] Nevertheless, the Commission reasoned that the analog functions of these handsets are otherwise subject to the same standards and rules as analog-only handsets, and that should continue to be the case in the critical area of 911 call processing.

B. The TriMode Portable User Terminal

QUALCOMM's TriMode Portable User Terminal has as its principal purpose operation with the worldwide Globalstar constellation of satellites. The Terminal, when fully provisioned,

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[5] Section 22.921 was added as follows:

> **§ 22.921— 911 Call Processing Procedures**. All mobile phones manufactured after [February 13, 2000] and capable of operating in the analog mode, *i.e.*, in compliance with "Cellular System Mobile Station-Land Station Compatibility Specification" (April 1981 Ed.), Office of Engineering and Technology Bulletin No. 53, pursuant to § 22.933 of the Commission's Rules, must incorporate a special procedure for processing "9-1-1" calls. Such procedure must recognize when a "9-1-1" call is made and, at such time, must override any programming in the mobile unit that determines the handling of a non-911 call and permit the call to be handled by other analog carriers. This special procedure must incorporate any one or more of the 9-1-1 call system selection processes endorsed or approved by the Commission.

[6] *Second Report and Order* at para 3. Subsequent to the *Second Report and Order*, the Commission approved other call completion methodologies.

[7] *Id.* at para. 85.

will operate automatically in a satellite mode and a CDMA/AMPS cellular mode in the following Commission approved transmit frequencies:

GS	1610-1621.35 MHz
CDMA/AMPS	824.02-848.98 MHz

The Globalstar satellite mode is the principal mode of operation. The Terminal can only be activated in the satellite mode by a Service Provider ("SP") authorized as part of the Globalstar network. In the United States and Canada, the Globalstar SP is Globalstar USA ("GUSA").

The QUALCOMM TriMode Portable User Terminal has been registered with the International Telecommunications Union ("ITU"). The Terminal has been authorized to display the ITU's Global Mobile Personal Communications Service ("GMPCS") Mark. The purpose of the Mark is to provide a recognizable designation that GMPCS terminals have met the essential standards for health and safety, electromagnetic interference and electromagnetic compatibility. It is intended to promote the trans-border circulation of these terminals to facilitate the mutual recognition of GMPCS type approvals.

In addition to the United States, the Terminal has been approved for sale, or has approvals pending, for use in many countries and areas of the world including the European Union, Canada, Mexico, Russia, Central America, South America, Korea, and China.

Globalstar is a global consortium of telecommunications companies established in 1991 to provide satellite telephony services through a network of service providers. Globalstar's constellation of 48 Low Earth Orbit ("LEO") satellites transmits calls from a Globalstar wireless handset, such as QUALCOMM's TriMode Portable User Terminal, to a gateway where they are passed on to existing terrestrial networks. Globalstar is designed to provide high quality satellite-based telephony to a broad range of users:

- Cellular users who roam outside of coverage areas;
- People who work in remote areas where terrestrial systems do not exist;
- Residents of under-served markets who can use Globalstar's network to satisfy needs for basic telephony; and
- International travelers who need to keep in constant touch.

In the United States and Canada, GUSA is responsible for marketing and distributing service, as well as billing and customer care operations and construction and operation of the U.S. Gateways.[8]

In addition to its operations with Globalstar, the Terminal is equipped to operate terrestrially in both digital and analog mode. To enable terrestrial operation, a user must purchase a cellular service contract from either a digital or analog service provider. If a user wishes to be able to utilize both the digital and analog modes, it must contract for digital, which typically includes both services. If the user wishes to use the terminal in multiple countries, for terrestrial operations, it must contract with multiple terrestrial service providers.

It is important to note that the Terminal provides 911 call completion in all three modes. Indeed, the Terminal – and the Globalstar system – are important additions to telecommunications emergency lifelines worldwide. For example, in July 2000, GUSA, the exclusive distributor of Globalstar satellite service in the United States, entered into a partnership with the American Red Cross to provide Terminals and Globalstar service for disaster relief. "We chose Globalstar USA because they could offer two things we absolutely need – mobility and reliability," said Robert Bavis, Director of Disaster Services Administration, National American Red Cross, at the time the partnership was announced.[9] Earlier in the year, several California Sheriff's Departments partnered with Globalstar to use the satellite service in areas not served by traditional landline and cellular networks. The Terminals are used with the Globalstar system for California Search and Rescue missions and other emergency situations.[10] The contribution that Globalstar can make to emergency relief – in the United States and worldwide – should not be underestimated.

When the Terminal is operating in the satellite mode in the United States, a call to 911 is directed to a Public Safety Answering Point ("PSAP"), just as would be the case in a terrestrial

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8 For more information about Globalstar and Globalstar USA, see www.globalstar.com and www.globalstarusa.com.

9 See www.globalstarusa.com/about/000727-1.shtml.

10 See www.app.airtouch.com/mediacenter/news_releases/2000-05/satellite.shtml.

911 call.[11] In fact, anyone equipped with the Terminal, provisioned by any Globalstar service provider in the world, is able to complete a satellite 911 call while roaming in the United States.

If the Terminal is provisioned for and operating in the digital cellular (CDMA) mode, a 911 call is processed in the same way, *i.e.*, routing to the PSAP via the digital cellular service provider. If the Terminal is provisioned for and operating in the analog cellular mode, a 911 call could be routed to the PSAP in several ways, depending on the user's programmed preference. If the user has programmed roaming between the two analog cellular service providers, the Terminal will search for either the A or B carrier signal until the 911 call can be completed. If, however, the user has programmed a preference of either A or B, the call will be routed to that carrier only.

C. Section 22.921 and the TriMode Portable User Terminal

There is no question that the Globalstar system, and the Terminal, represent an improvement in emergency communications techniques. The Terminal, when provisioned for satellite and terrestrial modes, offers the possibility of three separate service opportunities with 911 capability. Nevertheless, as presently programmed, the Terminal may not be fully in compliance with Section 22.921. At present, it does not incorporate one of the 911 call completion methods endorsed by the Commission for analog handsets.

QUALCOMM only very recently became aware that Section 22.921 applied to Terminals manufactured in the United States after February 13, 2000. Immediately upon becoming aware, QUALCOMM informed the Commission staff and sought guidance on compliance and waiver issues. Clearly, QUALCOMM should have known the extent to which Section 22.921 applied the TriMode Terminals manufactured after February 13, 2000. In this case, failure to be aware of the Commission's Rules applying to analog cellular equipment is the result of a corporate restructuring. Specifically, in late 1999, QUALCOMM sold the division responsible for manufacture of its cellular handsets. With that division went regulatory compliance expertise, as it pertained to Part 22 of the FCC Rules.

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[11] As of October 2000, software in newly manufactured terminals will make available position location information during a satellite call, thus enabling the user to provide the PSAP with that information.

No explanation suffices; the only remedy is compliance. Fortunately, none of the Terminals manufactured after February 13, 2000 have yet been delivered to end users. While not a simple matter, it is possible to develop, test and install software that can incorporate Automatic A/B Roaming-Intelligent Retry in all the Terminals presently awaiting shipment to or held by GUSA and its distributors. In addition, although not required by Section 22.921, QUALCOMM will provide the software for all Terminals, even those manufactured before February 13, 2000, that are returned for service or repair.

Development and testing of the necessary software will likely take about three months. During that period, QUALCOMM must continue to manufacture the Terminals in order to be assured of meeting worldwide orders for the equipment. Further, labor issues preclude suspending manufacture for a period of three months. Terminals manufactured during this period will not be delivered to U.S. end users until they have been made compliant with Section 22.921, and thus a waiver of the Rule may not be necessary. Nevertheless, a Petition for Waiver assures that the Commission is properly informed of the matter and that all Terminals are in full compliance with the Commission's Rules. Consequently, in this Petition, QUALCOMM requests a waiver of Section 22.921, to the extent necessary so that it may continue, until November 30, 2000, to manufacture Terminals that do not incorporate one of the 911 call completion methodologies previously approved by the Commission.

II. A TEMPORARY WAIVER OF SECTION 22.921 SHOULD BE GRANTED TO THE EXTENT NECESSARY TO ALLOW CONTINUED MANUFACTURE OF THE TRIMODE PORTABLE USER TERMINAL (GSP 1600)

A. Standards for Waiver

The Commission may grant a waiver when it is shown that

(1) the underlying purpose of the Rule(s) would not be served or would be frustrated by application in the instant case, and that a grant of the requested waiver would be in the public interest; or

(2) in view of unique or universal factual circumstances of the instant case, application of the Rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or that the applicant has no reasonable alternative.[12]

QUALCOMM will show that, in this case, strict application of Section 22.921 would frustrate the underlying purpose of the Rule and that grant of the waiver would be in the public interest.

B. Underlying Purpose of the Rule

As the Commission discussed in the *Second Report and Order*, it has been concerned with efforts to promote public safety for wireless telecommunications since early in the 1990s.[13] A principle issue concerned transmission of 911 calls from locations where the wireless caller's preferred carrier has a "blank spot" – an area where the system's radio signal is relatively weak or non-existent.[14]

Thus, the genesis of Section 22.921 was a desire to free a 911 caller from the constraints of geography or technology. Use of the Terminal in the Globalstar satellite system goes far toward accomplishing that goal. In the satellite mode, a caller can be assured of continuous, reliable coverage almost anywhere in the world, without regard to cellular "blank spots." An E911 call is relayed through the Globalstar satellites, to a gateway and routed through the terrestrial network to the PSAP.

In the terrestrial mode, an E911 caller has the capacity to use both digital and analog service providers, and, if so provisioned, to choose between the two. Thus, a TriMode terminal user has *three* opportunities for a successfully completed 911 call, not only the two opportunities intended by the Commission's Rules.

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12 47 C.F.R. § 1.925.

13 *Second Report and Order* at para. 5. *See also Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling systems*, CC Docket No. 94-102, Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 18676 (1996) ("*E911 First Report and Order and E911 Second NPRM*").

14 *Id.* at para. 6. A blank spot is a small area within a service area where the field strength is lower than the minimal level for reliable service. *See* 47 C.F.R. § 22.99.

In a recent case involving Samsung Telecommunications America, Inc. and Samsung Electronics Co. Ltd. ("Samsung"), the Commission granted a similar waiver request because it found a waiver would

> Afford customers greater access to the benefits of digital technology, which in many instances may include an increased likelihood of clear and meaningful communication with a Public Safety Answering Point in the event a calling party has to make an emergency call.[15]

In the case of the Terminal, not only do consumers have greater access to digital technology, but they also have access to satellite technology through the Globalstar system. The advantages of satellite technology for emergency communications, particularly in remote or rural areas where cellular or wireline services may be scant, are obvious. The confidence the American Red Cross and the California Sheriff's Department have shown in the Globalstar system bears witness to this fact. If the requested waiver were not granted, these advantages of satellite technology could be forestalled or diminished. This would certainly frustrate improvement in emergency communications, the overall intent of the Rule.

C. Public Interest

The second prong of the waiver test, that a grant would be in the public interest, is also satisfied in this case.

1. Development of Technology

In considering the adoption of Section 22.921, the Commission chose not to apply the Rule to new technologies such as digital cellular, PCS, or satellite. The Commission understood that the consumer would not benefit from delay in the deployment of these technologies during review of call completion methods by standards bodies or other industry groups. Nor would

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[15] Samsung Telecommunications America, Inc. and Samsung Electronics Co., Ltd., Request for Temporary Relief Regarding E911 Call Processing Modes, WT Docket No. 99-328, DA 00-1466, released June 30, 2000, at para. 9 ("*Samsung Order*"). In addition, the Commission has granted waiver requests to other major manufacturers of multi-mode handsets. *See 911 Call Processing Modes*, WT Docket 99-328, Waiver Request of Nokia, Inc., 15 FCC Rcd 1911 (2000); Waiver Request of Motorola, Inc., 15 FCC Rcd 3075 (2000); Waiver Request of Ericsson, Inc., DA 00-253, Rel. February 11, 2000.

delaying implementation of the Rule as it applies to analog cellular handsets benefit the consumer.[16]

Second, the Commission did not make the rule immediately effective. It gave manufacturers nine months to make the necessary programming changes in order to avoid disruption in the manufacturing process.[17]

In this connection, the *Samsung Order* based grant of a waiver on the Commission's expressed concern that

> Disruption of multi-mode handset production and competition while demand for handsets continues to grow strongly could adversely affect consumers. The effects could consist of higher prices, confusion and reduced availability of dual band multi-mode handsets.[18]

In the case of the QUALCOMM Terminals, the Commission should consider that the market is worldwide. A disruption in the manufacturing process could affect consumers not only in the United States but virtually worldwide.

The Commission should also recognize that halting the manufacturing process, even when there is an inventory of handsets, can be very disruptive. There is no guarantee that skilled technicians, released from a work schedule for a period of months, would be willing or able to return. Hiring and training new workers could negatively impact both the quality of the product and its distribution schedule. This, in turn, could affect the deployment and ultimate success of the new technology.

2. Consumer Interest

Further, grant of a temporary waiver permitting continued manufacture will not cause any harm to the consumer because *all* Terminals, manufactured after February 13, 2000, even those manufactured during the waiver period, will be fitted with the new software *before* being distributed to U.S. end users. QUALCOMM is able to make this statement because most of the terminals manufactured by QUALCOMM for the U.S. market were manufactured before

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16 *See Second Report and Order* at para. 90.

17 *Id.* at para. 87.

18 *Samsung Order* at para. 8.

February 13, 2000 and because the U.S. distributors use a First In-First Out ("FIFO") sales and activation schedule. Simply put, not all the Terminals manufactured before February 13, 2000 have been sold and activated and the inventory is sufficient to accommodate anticipated U.S. demand during the temporary waiver period.

Moreover, notwithstanding the fact that the terminals currently in use in the U.S. were all manufactured before the February 13 effective date, QUALCOMM will commit to providing the software upgrade to any customer who seeks it. QUALCOMM will also enable the provisioning of the terminals in GUSA distribution inventory at Cellstar, whether or not manufactured before February 13, 2000, with the software upgrade. This will be accomplished by QUALCOMM making available to Cellstar, the value added distributor for GUSA, the software upgrade which will be installed as a matter of course in terminals released for sale on a FIFO basis.

All of this depends, of course, on the successful development and testing of the Automatic A/B Roaming – IR software upgrade. Based upon QUALCOMM's own experience and the precedents of others in similar situations, QUALCOMM believes that development and testing can be accomplished within 3 months.[19] During this temporary waiver period, QUALCOMM will continue manufacture of the TriMode Terminal as it works to perfect the software upgrade. Once the software upgrade is ready (possibly before the three-month deadline) QUALCOMM will incorporate the software into the manufacturing process. At the same time, QUALCOMM will make the software upgrade available to enable retrofitting inventoried handsets on a FIFO basis, to be sure Terminals sold in the USA after the software is available – even if manufactured before February 13 – will have the Automatic A/B Roaming capability.

Also during this same period, QUALCOMM will offer the software upgrade to any Globalstar USA customer who seeks it and will automatically upgrade the software in any phone returned for service or repair. This offer will apply to all GUSA customers, whether or not their Terminal was manufactured after February 13, 2000.

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[19] A three-month period for development and testing of software is generally consistent with the waivers granted by the Commission to Samsung (3 months), Nokia (4 months) and Ericsson (3 months).

In sum, it is clear that the public interest favors a grant of the requested temporary waiver, first because a waiver will support the development of satellite technology and avoid the confusion and disruption that would accompany a halt in manufacturing and, second because a waiver will satisfy consumer interests and result in increased deployment of analog call completion techniques beyond that required in the *Second Report and Order*.

For these reasons, QUALCOMM believes it has met the Commission's standards for waiver and urges the Commission to grant a temporary waiver of Section 22.921 to allow continued manufacture of the TriMode Portable User Terminal.

III. QUALCOMM WILL REVIEW AND IMPROVE ITS REGULATORY COMPLIANCE MEASURES

At the heart of this case is a failure on QUALCOMM's part to maintain adequate regulatory compliance procedures. QUALCOMM is currently reviewing these procedures and is hoping to work with the Commission staff to develop a Regulatory Compliance Plan ("RCP"). It is anticipated that that Plan will include the appointment of an engineer, and an alternate, who will be responsible for overseeing compliance with the Commission's technical rules. As the RCP is developed and implemented, QUALCOMM will keep the Commission informed and seek further Commission staff guidance as appropriate.

QUALCOMM has an excellent overall record of compliance with the Commission's Rules. As a Commission licensee, pioneer, developer and manufacturer of communications technology and services, QUALCOMM is surpassed by few companies. Its efforts to exceed applicable requirements in this case should demonstrate the seriousness and sincerity with which it will address all regulatory compliance issues on a going-forward basis.

IV. CONCLUSION

In this Petition for Waiver, QUALCOMM has demonstrated that it meets the Commission's standards for waiver of Section 22.921. It requests that the Commission grant a temporary waiver of the requirements of the Rule, to allow continued manufacture of the

Terminal, until November 30, 2000, to enable QUALCOMM to develop and incorporate changes to the Terminal to render them fully compliant with Section 22.921.

Respectfully submitted,

QUALCOMM Incorporated

By _____
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Dated: August 31, 2000

Its Attorneys

CERTIFICATION

I, Michael E. Carosella, hereby certify:

1. My name is Michael E. Carosella. I am Program Director, Globalstar User Terminals, at QUALCOMM Incorporated. In that capacity I have personal knowledge of matters relating to the manufacture and distribution of QUALCOMM's TriMode Portable User Terminal.

2. I have read the foregoing Petition for Waiver. All of the facts and circumstances described therein are true to the best of my information and belief.

Michael E. Carosella
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Dated: August 30, 2000